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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,609	02/06/2004	Thomas Cho	61140-8018.US01	7770
22918	7590	09/22/2006	EXAMINER	
PERKINS COIE LLP P.O. BOX 2168 MENLO PARK, CA 94026			TRAN, TUAN A	
			ART UNIT	PAPER NUMBER
			2618	

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 10/773,609	Applicant(s) CHO, THOMAS	
	Examiner Tuan A. Tran	Art Unit 2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-25 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 9 is objected to because of the following informalities: "A dual-mode complex filter according to claim 1" should be changed to "A dual –mode complex filter according to claim 6". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-6, 9-10, 13-14, 16-23 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Darabi et al. (7,031,668).

Regarding claims 1-5, Darabi discloses a transceiver operable to process Bluetooth and wireless local area network (wireless LAN) signals (See fig. 1) wherein the transceiver is integrated into a single IC chip, the transceiver comprising: a radio-frequency unit 22, 24; a digital baseband unit 30-36, 16 configured to generate a mode control signal indicative of Bluetooth or wireless LAN operation; a dual-mode filter and amplifier unit 26, 28 having a first Bluetooth-compatible mode and a second wireless

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LAN mode, the dual-mode filter and amplifier unit coupled to the radio frequency unit and digital baseband unit and configured to select an operating mode from the first and second modes responsive to said mode control signal (See figs. 1-2 and col. 6 line 5 to col. 7 line 6, col. 7 line 57 to col. 8 line 67), wherein the dual-mode filter and amplifier 26, 28 comprises a dual-mode filter 26 having at least one component (such as transistors 94, 96) and a dual-mode amplifier having at least one component (such as operational amplifier 929-936) in use during both the Bluetooth-compatible mode and the WLAN mode (See figs. 5-6 and 14).

Claims 18-20 are rejected for the same reasons as set forth in claims 1-5, as method.

Regarding claims 6 and 9, Darabi discloses a dual-mode complex filter 26 having a first Bluetooth-compatible mode and a second 802.11b WLAN mode (See fig. 2 and col. 6 lines 47-54), the filter comprising at least one adjustable component operable to select (controlled by the controller 16) the first mode or the second mode, wherein the adjustable component comprises a resistor (See figs. 12 a-b and col. 17 line 50 to col. 19 line 10).

Claims 21-22 are rejected for the same reasons as set forth in claims 6 and 9, as method.

Regarding claims 10 and 13-14, Darabi discloses A dual-mode amplifier unit having a first Bluetooth-compatible mode, and having a second 802.11b WLAN mode, the amplifier comprising: at least a first stage having an operational amplifier 930; at least a first feedback component; and at least a first switch 930' coupled to said

feedback component and said operational amplifier having a first mode and a second mode, such that in said first mode the dual-mode amplifier unit is operable in said first Bluetooth-compatible mode and the feedback component is disconnected from said operational amplifier and in said second mode the dual-mode amplifier unit is operable in said second 802.11b WLAN mode and the feedback component is coupled between an input and an output port of said operational amplifier, wherein during operation in the Bluetooth-compatible mode (Bluetooth protocol is widely known to utilize frequency modulation), the first stage operates as a limiter and during operation in the WLAN mode, the first stage operates as a voltage gain amplifier (See figs. 2, 14 and col. 19 line 51 to col. 20 line 24).

Claim 23 is rejected for the same reasons as set forth in claims 10, 13-14, as method.

Regarding claims 16-17, Darabi discloses a transceiver including a dual-mode analog baseband having reduced IC chip area, the transceiver including a filter of claim 6 coupled to an amplifier of claim 10, wherein the filter and amplifier are formed on a single semiconductor substrate (See fig. 2 and col. 5 line 54 to col. 6 line 4).

Claim 25 is rejected for the same reasons as set forth in claims 16-17, as method.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darabi et al. (7,031,668).

Regarding claims 7-8, Darabi discloses as cited in claim 6. Darabi further discloses the filter during the first Bluetooth mode operates to pass signals having a frequency around 2 MHz over a bandwidth of approximately 1 MHz (See fig. 11 and col. 19 lines 21-49). However, Darabi does not mention that during the second WLAN mode, the filter operates to pass signals having frequency around DC over a bandwidth of approximately 7.5 MHz. Since Darabi does suggest that the filter can be programmed to handle multiple wireless communications standards with multiple modulation schemes and frequencies (See col. 6 line 47 to col. 7 line 5); therefore, it would have been obvious to one skilled in the art at the time the invention was made to configure the filter to pass signals having frequency around DC over a bandwidth of approximately 7.5 MHz during the second WLAN mode for the advantage of expanding the capability of the system to various types of communication protocols as well as enhancing the signal quality of the received signals.

3. Claims 11-12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darabi et al. (7,031,668) in view of Cavigelli (5,317,277).

Regarding claims 11-12, Darabi discloses as cited in claim 10. However, Darabi does not mention that the feedback component includes a resistor coupled to a capacitor and the first switch. Since the technique of feedback control of an amplifier,

wherein the feedback components include at least a resistor coupled to a capacitor is well known in the art as shown by Cavigelli (See fig. 3A); therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a feedback loop including resistor and capacitor as taught by Cavigelli for the programmable multiple gain amplifier as disclosed by Darabi for the advantage of maximizing a loop gain for a desired frequency.

Claim 24 is rejected for the same reasons as set forth in claims 11-12, as method.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Vaisanen (2004/0192222); Vaisanen (6,560,443); Saari (2003/0124982).

Allowable Subject Matter

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 15, Durabi discloses as cited in claim 10. However, Durabi does not mention that a capacitor coupled to an output of the operational amplifier and at least a second switch coupled to the capacitor, such that during operation in the first Bluetooth compatible mode, the capacitor at least in part determines an AC coupling corner frequency of said first stage.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Tran whose telephone number is (571) 272-7858. The examiner can normally be reached on Mon-Fri, 10:00AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tuan Tran

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